

REMARKS/ARGUMENTS

Claims 1, 2, 4-7, 9-18 and 28-33 are pending. Claims 1, 6, 13, 28, and 32 have been amended and claims 3, 8 and 19-27 have been cancelled.

Reconsideration of the application is respectfully requested for the following reasons.

In the Office Action, claims 1-11 and 13-33 were rejected under 35 U.S.C. § 102(e) for being anticipated by the Bergman patent. This rejection is respectfully traversed for the following reasons.

Claim 1 recites a histogram converter which “converts the color histogram of one of the extracted query multimedia data and the color histogram of the multimedia data to be retrieved into a histogram having a color space and color quantization of the other of the color histogram of the extracted query multimedia data and the multimedia data to be retrieved.” The Bergman patent does not disclose a converter of this type.

The Bergman patent discloses a system for performing a histogram conversion. As shown in Figure 19, the system includes a search engine 1902 which converts a query color histogram Q of one type into a color histogram of another type, for purposes of performing an image search in image archives 1-3. In performing this conversion, the Bergman patent discloses that the query histogram may be in an RGB color space and that the converted histogram may be a function of this RGB color space, i.e., the Bergman converter only performs a histogram

conversion based on color space. Bergman does not disclose that search engine 1902 performs a histogram conversion based also on color quantization as recited in claim 1.

Such a conversion is shown in the non-limiting embodiment of Figure 4 of Applicant's drawings. Here, a histogram conversion is performed from one color space (RGB) and color quantization (R: five levels, G: five levels, B: five levels) into a histogram having another color space (HSV) and color quantization (H: seven levels, S: seven levels, and V: seven levels). The Bergman search engine does not perform a transformation of this type, but rather only converts histograms based on color space.

Because the Bergman patent does not disclose all of the features recited in claim 1, it is respectfully submitted that claim 1 cannot be anticipated by this patent. Further, Applicant respectfully submits that these differences are sufficient to render claim 1 and its dependent claims non-obvious in those patentable over Bergman.

Claim 6 recites a content-based multimedia retrieval method which includes "converting a color histogram of one of the inputted query multimedia data and multimedia data to be retrieved into a color histogram having a color space and color quantization method of the other of the inputted query multimedia data and multimedia data to be retrieved." The Bergman patent does not disclose this converting step, i.e., as previously discussed the Bergman patent only performs a histogram conversion based on color space not based on color space and color quantization as recited in claim 6.

Because the Bergman patent does not disclose all of the features of claim 6, it is respectfully submitted that claim 6 cannot be anticipated by this patent. Moreover, it is submitted that these differences are sufficient to render claim 6 and its dependent claims non-obvious most patentable over Bergman.

Claim 13 recites “comparing the extracted color space and color quantization method of the query image with the color space and color quantization method of the multimedia data to be retrieved.” The Bergman patent does not disclose these features.

In performing a color histogram transformation, search engine 1902 of the Bergman system transforms a color histogram in one color space to a color histogram in another color space, so that a query image may be compared to an image stored in an archive. In order to perform this transformation, the search engine must have knowledge of the color spaces of the images to be transformed. However, the Bergman patent does not disclose comparing color quantization methods used to extract the histogram of the query image and the histograms for the images stored in its archives during a transform.

Claim 13 also recites “converting the color histogram of one of the extracted query multimedia data and the multimedia data to be retrieved into a color histogram having a same color space and color quantization method as the other of the extracted query multimedia data and the multimedia data to be retrieved.” The Bergman patent does not teach or suggest performing this conversion.

Because the Bergman patent does not disclose all of the features in claim 13, it is respectfully submitted that claim 13 cannot be anticipated by the Bergman patent. Applicant further submits that these differences are sufficient to render claim 13 and its dependent claims non-obvious and thus patentable over Bergman.

Claim 17 recites “comparing the color spaces and color quantization methods of the query multimedia data and multimedia data to be retrieved,” and then performing a histogram conversion. The Bergman patent does not disclose comparing color quantization methods performed for query color histogram Q and the color histograms formed for the images stored in its archives. Also, the recited conversion is also performed based on color quantization method, a conversion which is not disclosed in the Bergman patent.

Because the Bergman patent does not disclose all of the features in claim 17, it is respectfully submitted that claim 17 cannot be anticipated by this patent, furthermore, it is submitted that these differences are sufficient to render claim 17 and its dependent claims non-obvious and thus patentable over Bergman.

Claim 28 recites “a description means for describing color space and color quantization method of an extracted color histogram.” The Bergman patent does not disclose a description means of this type. As previously discussed, when performing its color histogram transformations the Bergman patent does not disclose that search engine 1902 takes color quantization method into consideration. Also, claim 28 recites “a second color quantizer which

extracts a color histogram of query multimedia data using a method which is same as the described color space and color quantization method” determined by the description means. The Bergman patents also does not disclose these features.

Based on these differences, it is respectfully submitted that claim 28 and its dependent claims are patentably distinguishable for Bergman.

Claim 32 recites “judging whether a color histogram of query multimedia data corresponding to a color space and quantization method of multimedia data to be retrieved is stored in advance.” The Bergman patent does not disclose these features, i.e., Bergman does not judge histograms based on color quantization nor does it perform such a judgement in advance of performing a similarity calculation between the color histograms. Based on these differences, it is respectfully submitted that claim 32 and its dependent claims are patentably distinguishable from the Bergman patent.

The Examiner rejected claim 12 under 35 U.S.C. § 103 for being obvious based on a Bergman-Yaung combination. This rejection is respectfully traversed for the following reasons.

Claim 12 depends from claim 6. In order to render claim 12 obvious, the Yaung patent must therefore teach or suggest the features of claim 6 missing from the Bergman patent. The Yaung patent was cited for its disclosure of a threshold value used in performing a similarity comparison between multimedia data. The Yaung patent, however, does not teach or suggest converting a color histogram of one of a query multimedia data and multimedia data to be

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retrieved into a color histogram having a color space and color quantization of the other of the query multimedia data and multimedia data to be retrieved.

Absent a teaching or suggestion of these features, it is respectfully submitted that the Yaung patent cannot make up for the deficiencies of the Bergman patent. Accordingly, it is submitted that claim 12 is non-obvious and thus patentable over a Bergman-Yaung combination at least by virtue of its dependency from claim 6.

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CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Samuel W. Ntiros**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



Daniel Y.J. Kim
Registration No. 36,186
Samuel W. Ntiros
Registration No. 39,318

P.O. Box 221200
Chantilly, Virginia 20153-1200
703 766-3701 DYK/SWN/JHK:cre:par
Date: April 20, 2004

Please direct all correspondence to Customer Number 34610